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Benefits and Harms of Using Statins to Prevent Cardiovascular Disease

Yebyo, Henock Gebremedhin ; Aschmann, Hélène E ; Puhan, Milo Alan

Abstract: What is the problem and what is known about it so far? We know that people who smoke cigarettes are at risk for a heart attack, stroke, and other diseases of the blood vessels. So are those who have diabetes, an elevated level of cholesterol in the blood, and some other risk factors. It is even possible to predict a person's risk for these diseases by using that person's risk factors. Experts recommend that clinicians prescribe statin medications to prevent these diseases when a person's risk is above a specific level.

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Benefits and Harms of Using Statins to Prevent Cardiovascular Disease

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What is the problem and what is known about it so far?

We know that people who smoke cigarettes are at risk for a heart attack, stroke, and other diseases of the blood vessels. So are those who have diabetes, an elevated level of cholesterol in the blood, and some other risk factors. It is even possible to predict a person's risk for these diseases by using that person's risk factors. Experts recommend that clinicians prescribe statin medications to prevent these diseases when a person's risk is above a specific level.

Why did the researchers do this particular study?

Current recommendations pay more attention to the benefits of statins and less attention to their harms, which include new diabetes, conditions that cause muscle pain, and other side effects.

Who was studied?

The researchers compared men and women aged 40 to 75 years who were taking or not taking statins and who did not have a history of heart attack, stroke, or another disease of the blood vessels.

How was the study done?

The researchers programmed a computer to model how statins interact with risk factors to prevent or reduce these diseases and how often statins cause harm. The model used information from studies published in the medical literature and from a survey of men and women aged 40 to 75 years.

What did the researchers find?

The level of risk at which statins should be prescribed is higher than the currently recommended level. Also, the level varies widely according to the person's age and sex and the type of statin.

What were the limitations of the study?

We know less about the harms of statins than we know about their benefits.

What are the implications of the study?

Experts who write guidelines should reconsider current recommendations for prescribing statins in people who are at risk for, but have not yet had, heart attacks, strokes, or other diseases of the blood vessels.

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